AMENDMENTS TO THE CLAIMS

1. (Original) A combustor controller controlling a combustor, which is mounted to a gas turbine being installed to a same shaft of a generator, and supplying the relevant gas turbine with combustion gas so as to rotate it, comprising:

a fuel flow rate operating section which sets a flow rate of fuel being supplied to said combustor based on a differential value between an output of said generator and an aimed output of said generator;

a turbine inlet temperature operating section which determines a turbine inlet temperature serving as a temperature of combustion gas flowing into said gas turbine from said combustor based on a flow rate and a temperature of fuel and air, respectively, flowing into said combustor;

a pilot ratio operating section which sets a pilot ratio serving as a ratio of a pilot fuel, being supplied to a pilot nozzle inside said combustor that performs diffusion combustion of a pilot light, versus entire fuel flow rate serving as a total of said pilot fuel and a main fuel, being supplied to a main nozzle inside said combustor that performs premixed combustion by mixing air and fuel, based on a turbine inlet temperature determined by said turbine inlet temperature operating section; and

an air flow rate operating section which sets a flow rate of air flowing inside said combustor based on a turbine inlet temperature determined by said turbine inlet temperature operating section;

and is characterized by:

wherein, flow rates of said pilot fuel and said main fuel are controlled based on a pilot ratio determined by said pilot ratio operating section and said fuel flow rate determined by said fuel flow rate operating section; and

wherein, combustion state of said combustor is controlled by controlling a flow rate of air flowing into inside of said combustor by air flow rate determined by said air flow rate operating section.

2. (Original) A combustor controller as described in Claim 1 is characterized by:

wherein, a pilot ratio calculated by said pilot ratio operating section is multiplied by a fuel flow rate determined by said fuel flow rate operating section so as to determine said flow rate of pilot fuel to said pilot nozzle;

wherein, said flow rate of main fuel to said main nozzle is determined by subtracting said flow rate of pilot fuel from said flow rate of fuel determined by said fuel flow rate operating section; and

wherein, flow rates of said pilot fuel and said main fuel are controlled by controlling openings of a pilot fuel control valve and a main fuel valve, respectively, based on said flow rates of pilot fuel and main fuel that are determined.

3. (Original) A combustor controller as described in Claim 1 is characterized by:

wherein, when air compressed by a compressor sharing a same shaft of said gas turbine is supplied to said combustor, an opening of an inlet guide vane being installed to said compressor and an opening of a combustor bypass valve being mounted to a passageway for supplying compressed air to said gas turbine, diverged from a passageway for supplying compressed air to said combustor from said compressor are controlled based on said flow rate of air determined by said air flow rate operating section.

4. (Original) A combustor controller as described in Claim 3 is characterized by:

wherein, a value of a flow rate of air being supplied to said combustor, which is to be supplied to said turbine inlet temperature operating section, is determined based on a differential pressure at an inlet of said compressor and an opening of said combustor bypass valve.

5. (Original) A combustor controller as described in Claim 1 is characterized by:

wherein, said fuel flow rate operating section comprising a subtraction section which determines a differential value between an output of said generator and an aimed output of said generator; and a flow-rate setting portion which sets a flow rate of fuel to said combustor based on a value determined by said subtraction section;

wherein, when said flow rate of fuel being set by said flow-rate setting section is more than a predetermined threshold, said predetermined threshold is specified as said flow rate of fuel so as to be supplied.

6. (Original) A combustor controller as described in Claim 1 is characterized by:

wherein, when said turbine inlet temperature determined by said turbine inlet temperature operating section is low, said pilot ratio determined by said pilot ratio operating section is high, and air flow rate to be determined by said air flow rate operating section will be increased; and

wherein, further, when said turbine inlet temperature determined by said turbine inlet temperature operating section is high, said pilot ratio to be determined by said pilot ratio operating section is low, and air flow rate determined by said air flow rate operating section will be decreased.

7. (Currently Amended) A combustor controller as described in ~~any of Claim 1 through Claim 6~~ Claim 1 is characterized by:

wherein, in said turbine inlet temperature operating section, said turbine inlet temperature T4 is determined by:

$$Cp4\ Vcb\gamma 4\times(dT4/dt)=$$

$$Cpf\ Gf\ Tf+Cp3\ G3\ T3+\eta Hf\ Gf-Cp4\ G4\ T4$$

where,

Gf: Flow rate of fuel to be supplied to said combustor

Tf: Temperature of fuel to be supplied to said combustor

G3: Flow rate of air to be supplied to said combustor

T3: Temperature of air to be supplied to said combustor

Cp3: Specific heat of casing of said combustor

Cp4: Specific heat of combustion gas generated in said combustor

Cpf: Specific heat of said fuel

η : Thermal efficiency of said combustor

Hf: Heat quantity of said fuel

$\gamma 4$: Specific gravity of said combustion gas

Vcb: Volume of said combuistor

G4: Flow rate of turbine inlet combustion gas (=G3 + Gf)

8. (New) A combustor controller as described in Claim 2 is characterized by:

wherein, in said turbine inlet temperature operating section, said turbine inlet temperature T4 is determined by:

$$Cp4\ Vcb\gamma 4\times(dT4/dt)=$$

$$Cpf\ Gf\ Tf+Cp3\ G3\ T3+\eta Hf\ Gf-Cp4\ G4\ T4$$

where,

Gf: Flow rate of fuel to be supplied to said combustor

Tf: Temperature of fuel to be supplied to said combustor

G3: Flow rate of air to be supplied to said combustor

T3: Temperature of air to be supplied to said combustor

Cp3: Specific heat of casing of said combustor

Cp4: Specific heat of combustion gas generated in said combustor

Cpf: Specific heat of said fuel

η : Thermal efficiency of said combustor

Hf: Heat quantity of said fuel

$\gamma 4$: Specific gravity of said combustion gas

Vcb: Volume of said combuistor

G4: Flow rate of turbine inlet combustion gas (=G3 + Gf)

9. (New) A combustor controller as described in Claim 3 is characterized by:

wherein, in said turbine inlet temperature operating section, said turbine inlet temperature T4 is determined by:

$$Cp4\ Vcb\gamma 4\times(dT4/dt)=$$

$$Cpf\ Gf\ Tf+Cp3\ G3\ T3+\eta Hf\ Gf-Cp4\ G4\ T4$$

where,

Gf: Flow rate of fuel to be supplied to said combustor

Tf: Temperature of fuel to be supplied to said combustor

G3: Flow rate of air to be supplied to said combustor

T3: Temperature of air to be supplied to said combustor

Cp3: Specific heat of casing of said combustor

Cp4: Specific heat of combustion gas generated in said combustor

Cpf: Specific heat of said fuel

η : Thermal efficiency of said combustor

Hf: Heat quantity of said fuel

$\gamma 4$: Specific gravity of said combustion gas

Vcb: Volume of said combuistor

G4: Flow rate of turbine inlet combustion gas (=G3 + Gf)

10. (New) A combustor controller as described in Claim 4 is characterized by:

wherein, in said turbine inlet temperature operating section, said turbine inlet temperature T4 is determined by:

$$Cp4\ Vcb\gamma 4\times(dT4/dt)=$$

$$Cpf\ Gf\ Tf+Cp3\ G3\ T3+\eta Hf\ Gf-Cp4\ G4\ T4$$

where,

Gf: Flow rate of fuel to be supplied to said combustor

Tf: Temperature of fuel to be supplied to said combustor

G3: Flow rate of air to be supplied to said combustor

T3: Temperature of air to be supplied to said combustor

Cp3: Specific heat of casing of said combustor

Cp4: Specific heat of combustion gas generated in said combustor

Cpf: Specific heat of said fuel

η : Thermal efficiency of said combustor

Hf: Heat quantity of said fuel

$\gamma 4$: Specific gravity of said combustion gas

Vcb: Volume of said combuistor

G4: Flow rate of turbine inlet combustion gas (=G3 + Gf)

11. (New) A combustor controller as described in Claim 5 is characterized by:

wherein, in said turbine inlet temperature operating section, said turbine inlet temperature T4 is determined by:

$$Cp4\ Vcb\gamma 4\times(dT4/dt)=$$

$$Cpf\ Gf\ Tf+Cp3\ G3\ T3+\eta Hf\ Gf-Cp4\ G4\ T4$$

where,

Gf: Flow rate of fuel to be supplied to said combustor

Tf: Temperature of fuel to be supplied to said combustor

G3: Flow rate of air to be supplied to said combustor

T3: Temperature of air to be supplied to said combustor

Cp3: Specific heat of casing of said combustor

Cp4: Specific heat of combustion gas generated in said combustor

Cpf: Specific heat of said fuel

η : Thermal efficiency of said combustor

Hf: Heat quantity of said fuel

$\gamma 4$: Specific gravity of said combustion gas

Vcb: Volume of said combuistor

G4: Flow rate of turbine inlet combustion gas (=G3 + Gf)

12. (New) A combustor controller as described in Claim 6 is characterized by:

wherein, in said turbine inlet temperature operating section, said turbine inlet temperature T4 is determined by:

$$Cp4\ Vcb\gamma 4\times(dT4/dt)=$$

$$Cpf\ Gf\ Tf+Cp3\ G3\ T3+\eta Hf\ Gf-Cp4\ G4\ T4$$

where,

Gf: Flow rate of fuel to be supplied to said combustor

Tf: Temperature of fuel to be supplied to said combustor

G3: Flow rate of air to be supplied to said combustor

T3: Temperature of air to be supplied to said combustor

Cp3: Specific heat of casing of said combustor

Cp4: Specific heat of combustion gas generated in said combustor

Cpf: Specific heat of said fuel

η : Thermal efficiency of said combustor

Hf: Heat quantity of said fuel

$\gamma 4$: Specific gravity of said combustion gas

Vcb: Volume of said combuistor

G4: Flow rate of turbine inlet combustion gas (=G3 + Gf)